Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

Docket # 99-328

In the Matter of	)
	)
SAMSUNG TELECOMMUNICATIONS AMERICA, INC.	)
	)
and	)
	)
SAMSUNG ELECTRONICS CO., LTD.	)
	)
	)
Request for Temporary Relief Regarding 911 Call Processing Methods	)

To: The Chief, Wireless Telecommunications Bureau

REQUEST FOR EMERGENCY TEMPORARY RELIEF

SAMSUNG TELECOMMUNICATIONS AMERICA, INC., and

SAMSUNG ELECTRONICS CO., LTD.

DOW, LOHNES & ALBERTSON, PLLC
1200 New Hampshire Avenue, N.W.
Suite 800
Washington, D.C. 20036-6802
(202) 776-2000

Leonard J. Kennedy
John S. Logan
Cécile G. Neuvens

Its Attorneys

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SUMMARY

Samsung Telecommunications America, Inc. and Samsung Electronics Co., Ltd. ("*Samsung*") request that the Commission expeditiously grant emergency temporary relief, including, to the extent necessary, a waiver of the analog 911 call completion methodology requirements of Section 22.921 of the Commission's Rules, for Samsung's manufacture and distribution of certain digital wireless handsets with analog capability after February 13, 2000. This relief would be only for the time necessary for Samsung to modify and test these handsets to comply with the rule, which in no event will be later than July 15, 2000.

Samsung became aware that its handsets may not fully comply with Section 22.921 only within the last two weeks and immediately sought the Commission's guidance as to how to address this issue. It is moving as expeditiously as possible to modify its handsets, but seeks a waiver so that it may continue to meet its minimum contractual obligations to United States wireless service providers, which are depending on Samsung's handsets to meet customer demand.

Grant of this request is justified on several distinct grounds. First, it will have little impact on the Commission's intent when it adopted the 911 call completion requirements, because Samsung's carrier customers sell these handsets in conjunction with their preferred digital service offerings. Their subscribers only use the analog capabilities of the handsets when digital coverage is unavailable or inadequate. Moreover, the handsets that Samsung would manufacture and distribute pursuant to this special relief represent only a small fraction of the analog handsets now in service that do not follow the prescribed 911 call completion methodologies.

In addition, the handsets at issue do provide users with access to 911 through digital services that comply fully with all Commission requirements. Thus, the analog components of these handsets merely serve to back up the primary digital service. Because these handsets are designed for and sold exclusively to U.S. carriers with preferred digital service offerings, there is little likelihood that the handsets will be used significantly in analog mode.

Furthermore, denial of this request would be contrary to the public interest because it would disrupt the development of digital services in the wireless market place. At a time when a shortage of handsets available for sale on the market is apparent, it is doubtful that other handset manufacturers would have the capacity to fulfill the sudden increased need for handsets that would be experienced by digital service providers that now rely on Samsung's delivery to satisfy new subscriber demand. This and the other factors described above weight the balance of the public interest heavily in favor of granting this request. Indeed, other manufacturers have filed and have been granted similar waiver requests under similar circumstances.

Samsung is proceeding to correct the problem as rapidly as possible and has devoted all possible resources to achieve that result. Samsung expects to have completed necessary software modifications by the end of this week or the first part of next week, with Samsung and carrier testing to follow immediately. It hopes to begin manufacturing modified handsets for one or more of the affected models as soon as May 31, 2000. Samsung also will upgrade the software of affected handsets returned for other repairs entailing handset software to include the new analog 911 call completion method, when it is possible to do so. In addition, Samsung is establishing new FCC compliance resources at its United States headquarters to enhance its ability to meet future regulatory requirements, consistent with Samsung's previous record of overall excellent compliance.

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To: The Chief, Wireless Telecommunications Bureau

REQUEST FOR EMERGENCY TEMPORARY RELIEF

Pursuant to Section 1.41[1] of the Rules of the Federal Communications Commission (the "Commission"), Samsung Telecommunications America, Inc. and its ultimate parent corporation, Samsung Electronics Co., Ltd. (collectively "Samsung"), by their attorneys, hereby request that the Commission expeditiously grant Samsung emergency temporary relief, including, to the extent necessary, a waiver of the requirements of Section 22.921 of its Rules, to permit Samsung temporarily to manufacture and distribute in the United States from and after February 13, 2000 certain digital handsets with analog capability using its pre-February 13, 2000

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[1] 47 C.F.R. § 1.41.

analog 911 call completion routines.[2] This relief would extend for a limited time period during which Samsung will devote substantial resources to implement as quickly as possible the Commission-approved Automatic A/B-IR analog 911 call completion method for the analog back-up facility of its digital handsets marketed in the United States.

I. INTRODUCTION

The Commission's new rules governing 911 call completion methods for wireless handsets operating in the analog mode apply to all analog-capable handsets manufactured after February 13, 2000. Samsung seeks the requested relief relating to these rules because of a determination, confirmed just days ago, that under certain circumstances analog 911 call processing of its digital handsets with analog capability may not fully conform with the Commission's approved 911 call completion methods.

Samsung is proceeding to correct the problem as rapidly as possible and has devoted all possible resources to achieve that result. Samsung expects to have completed necessary software modifications for the Affected Handsets by the end of this week or the first part of next week. Samsung will then seek to complete its own testing program, to be followed by tests on the networks by its carrier customers.

Based upon the foregoing, Samsung is optimistic that it will be in a position to manufacture handsets meeting the Commission-approved Automatic A/B-IR analog 911 call completion method by May 31, 2000, at the earliest and, at the latest, by July 15, 2000. During the interim period of emergency temporary relief, Samsung will limit its manufacture and

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[2] The model numbers for these handsets are the SCH-411, SCH-2500, SCH-3500, SCH-8500, and SCH-850 (collectively, the "*Affected Handsets*").

distribution of handsets for the United States market to the numbers of units necessary to meet the minimum carrier requirements under its pre-existing contracts with those carriers.

Samsung fully meets the standards for the temporary relief sought. First, a grant of the temporary relief will not frustrate the purpose of Section 22.921. By promulgating Section 22.291, the Commission sought to provide for evolutionary improvement in the efficiency and reliability of 911 call processing on analog wireless systems while promoting competition in the wireless telecommunications marketplace. The Commission expressly declined to impose specific 911 calling protocols on more advanced digital Personal Communications Service ("*PCS*") and Enhanced Specialized Mobile Radio ("*ESMR*") handsets because it found the requirements unnecessary and potentially counterproductive.

Granting Samsung temporary relief will not frustrate this purpose because, as described more fully below, the Affected Handsets are designed to operate in digital mode. The analog mode is available only as a backup to normal digital operations. As a result, Samsung markets its handsets only to U.S. carriers with preferred digital service offerings, a circumstance that makes it unlikely that the Samsung handsets will be used significantly in the analog mode.

Second, grant of the requested relief will advance the Commission's objective of promoting competition in the wireless market, given the demonstrated need of digital carriers for handsets to add additional subscribers. Samsung seeks this special relief not to expand its existing marketing and sales during any waiver period, but, rather, to meet existing contractual commitments and to avoid harm to digital carriers that, without Samsung product, may not be able to meet new subscriber handset demand. In the absence of special relief, a serious disruption in the competitive wireless marketplace could result because expanding digital

carriers dependent upon Samsung units would be substantially restricted from adding new subscribers.

Finally, if the temporary relief is not granted, the resulting harm to the public interest in an efficient and competitive wireless telecommunications market would be wholly disproportionate to the advancement of the policies underlying the analog 911 call processing orders. A strict adherence to the February 13, 2000 deadline in these circumstances would contravene the policy of seeking an evolutionary transition to more effective analog 911 call processing without unduly restricting the growth of digital wireless services. Indeed, strict application of Section 22.921 would be unduly burdensome in that it could slow the growth of digital technologies in the United States.

In recognition of these factors, the Commission recently has granted waivers of Section 22.291 under very similar circumstances to other manufacturers of wireless handsets. Accordingly, for the reasons stated below, Samsung respectfully requests that the Commission grant the requested relief.

II. BACKGROUND

A. Samsung Only Recently Discovered That Modification of Its Current 911 Call Completion Method Could Be Necessary Under the Rules.

Samsung only very recently became aware of its critical need for immediate temporary relief from the February 13, 2000 date for implementation of Commission-prescribed 911 call processing methods. As described below, the necessity for such relief arose from an inadvertent error.

As the Commission knows, Samsung manufactures digital and multi-mode handsets for use worldwide. Historically, it has maintained a central office for regulatory compliance at the headquarters of its ultimate parent corporation in Korea. Following issuance of the *E911 Second*

Report and Order, a memorandum was prepared internally in the Korean language for purposes of implementing the Commission's directives. This memorandum did not adequately highlight that the February 13, 2000 deadline applied to *all* analog-capable digital handsets *manufactured* after that date and not just to those *submitted for authorization* after that date. The memorandum, as circulated to Samsung's manufacturing divisions, led Samsung to understand that handsets authorized by the Commission prior to February 13, 2000 would not be affected by the new rule.

In March 2000, as a result of information obtained from newly-retained outside counsel, Samsung first became aware that its interpretation of the E911 requirements might have been mistaken. Samsung reviewed the E911 requirements with its new outside counsel and began an immediate investigation of its equipment. On March 31, 2000, Samsung's engineers confirmed that it was possible that a software modification would be necessary to satisfy the *E911 Second Report and Order* mandates. On the same day the potential problem was confirmed, Samsung directed its outside counsel to schedule a meeting with the Commission as soon as the Commission staff's schedule would permit, and Samsung engineers began to assess how they could most expeditiously bring the handsets into indisputable compliance.

Given these circumstances, the Commission need not have any concern that a grant of the temporary relief requested by Samsung would diminish in any way Samsung's efforts to maintain its historically excellent record of compliance with the Commission's rules. But for its misunderstanding of how the Commission's new rule affected its handsets, Samsung would have been in full compliance as of the February 13, 2000 deadline. Indeed, in light of this single significant error in its heretofore effective system for ensuring compliance, Samsung has accelerated improvements that were already in progress regarding the monitoring of U.S.

regulatory developments and, as described below, is now establishing an FCC compliance resource at its Richardson, Texas, headquarters.

Samsung's immediate actions following discovery of this problem underscore its sense of responsibility. Moreover, as discussed more fully below, the burden of a denial of relief would not fall exclusively or even primarily upon Samsung, and thus would not be an appropriate sanction against Samsung.

B. The Commission's Policy on 911 Call Completion Under the E911 Second Report and Order Was Intended to Address Only Analog Services.

In the *E911 Second Report and Order*, the Commission sought to address an important public safety concern related to the ability of *analog* mobile phone users to complete 911 wireless calls successfully.[3] To improve 911 call completion, the Commission adopted Section 22.921 of its Rules, requiring all mobile phones operating in an analog mode, including dual-mode and multi-mode handsets, to incorporate a special procedure for processing 911 calls, so that "calls that cannot be handled by one of the cellular carriers [...] will be routed to the other carrier for transmission to emergency dispatchers."[4] The purpose of this rule is to improve analog 911 reliability, increase the probability that analog 911 calls will be efficiently and successfully transmitted to public safety agencies and provide for the security and safety of analog mobile phone users, especially in rural and suburban areas.[5]

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[3] *See* Revision of the Commission's Rules to Ensure E991 Emergency Calling Systems, CC Docket No. 94-102, *Third Memorandum Opinion and Order*, FCC 00-7, ¶ 8 (released January 13, 2000) ("*E911 Third Memorandum Opinion and Order*").

[4] Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Second Report and Order*, 14 FCC Rcd, 10954, 10956 (released June 9. 1999) ("*E911 Second Report and Order*").

[5] *E911 Third Memorandum Opinion and Order*, FCC 00-7, at ¶ 8; *E911 Second Report and Order*, 14 FCC Rcd at 10956, 10993.

The Commission sought to foster these changes in an evolutionary way that did not disrupt analog suppliers or carriers or affect competition in the wireless telecommunications marketplace. Thus, for example, the Commission recognized that an enormous number of subscriber handsets already in service would not comply with the newly prescribed methods, yet found no reason to require any replacement or alteration of existing handsets, or even manufactured handsets remaining in inventory. Manufacturers were free to continue selling non-compliant units manufactured before the February 13, 2000 transition date without any modification.

The Commission's analog 911 call processing rule principally addressed safety issues in a wireless market dominated by two analog cellular carriers, which reflected the status of the wireless market when the Commission initiated its 1994 *Notice of Proposed Rulemaking* and its 1996 *Further Notice* in CC Docket No. 94-102.[6] The *E911 Second Report and Order* was never intended to apply to the rapidly growing digital PCS and ESMR businesses."[7] Only the analog

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[6] *See* Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Notice of Proposed Rulemaking*, 9 FCC Rcd 6170 (released October 19, 1994); Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems, *Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 94-102, 11 FCC Rcd 18676 (released July 26, 1996) (the "*E911 Further Notice*"). The *E911 Second Report and Order* observed that 911 call completion difficulties often result from the gaps or a "blank spot" in the signal coverage provided by wireless carriers. Coverage gaps are more common in rural and suburban areas usually served only by analog networks. Although current cellular handsets are capable of making calls both cellular carriers within a service area, cellular subscribers' mobile phones typically are set to restrict access to the alternative carrier. Reducing the blank spot problem, especially in areas served predominantly by analog cellular carriers, required measures such as those adopted in the *E911 Second Report and Order* for analog cellular handsets. These measures are unnecessary for digital-only and multi-mode handsets designed to work primarily on digital networks. *See E911 Second Report and Order*, 14 FCC Rcd at 10961-10962. *See also E911 Further Notice*, 11 FCC Rcd at 18749, ¶ 151.

[7] *E911 Second Report and Order*, 14 FCC Rcd at 10956, ¶ 3.

portion of dual-mode and multi-mode handsets is affected by these rules. The *E911 Second Request and Order* indicates that dual-mode and multi-mode handsets may operate in a digital mode in routing 911 calls without being subject to any specific requirements.[8] The additional services and features available through digital handsets support the Commission's conclusion that such "technologically advanced handsets" need not be subject to the 911 call completion requirements that the Commission imposed on analog handsets.[9]

Furthermore, in the waiver orders that followed the *E911 Second Report and Order,* the Commission expressed concern that disrupting multi-mode handset production and competition while demand for handsets continues to grow strongly would be inappropriate.[10] Disrupting handset production, the Commission acknowledged, would lead to higher prices, consumer confusion, and reduced availability of multi-mode handsets, all of which could harm consumers.

The Commission granted the previous waivers to manufacture multi-mode handsets whose analog operation does not meet its new 911 call completion rule for two reasons: (i) multi-mode handsets had not been proven to cause public harm in emergency situation but, instead, are likely to improve 911 call completion; and (ii) a rigorous application of the E911 rules to these

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8 *Id.* at 10991, ¶ 86.

9 911 Call Processing Modes, WT Docket No. 93-328, *Order* DA 00-132, ¶ 11 ("*Nokia Order*"). The Commission acknowledged the benefits of such trends for 911 call completion purposes: completing 911 calls through digital channels offer advantages associated with digital technology such as improved capacity, call quality, coverage and increased talk time for portable phone, which increase the likelihood of clear communication between the calling party and the Public Safety Answering Point ("*PSAP*"). Digital systems can assign analog voice channels when the caller moves outside of the digital coverage area whereas analog systems do not automatically hand off to digital. These additional services and features available through digital handsets support the Commission's conclusion that such "technologically advanced handsets" need not be subject to the 911 call completion requirements that the Commission imposed on analog handsets.

10 911 Call Processing Modes, WT Docket No. 93-328, *Order*, DA 00-253, ¶7 (released February 11, 2000) ("*Ericsson Order*").

handsets would be detrimental to competition in the wireless telecommunications market. As described below, the same factors apply in the instant case and establish that Samsung, like these other manufacturers, should be granted a waiver.

III. GRANT OF TEMPORARY RELIEF WOULD BE CONSISTENT WITH THE PUBLIC INTEREST AND WOULD PREVENT DISRUPTION IN THE EXPANSION OF DIGITAL WIRELESS SERVICE ACROSS THE COUNTRY.

Samsung is expeditiously implementing changes to its current 911 call completion methodology to incorporate the Automatic A/B-IR method approved by the *E911 Second Report and Order*. While Samsung resolves its outstanding technical issues and completes the testing of the software upgrade, it must honor its existing contractual supply arrangements with U.S. digital service providers. Therefore, Samsung seeks expeditious temporary relief from the Commission under Section 4(i) of the Communications Act and a waiver of Section 22.921 of the Rules.[11]

Under Section 22.119(a) of its Rules, the Commission may grant a request for waiver if it is shown that:

> (1) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or
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> (2) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or that the applicant has no reasonable alternative.[12]

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[11] Section 22.921 does not preclude manufacturers from seeking a waiver or temporary relief from the Commission after the February 13, 2000 deadline.

[12] 47 C.F.R. § 22.199(a). Section 24.819(a)(1) of the Commission's Rules, which applies to PCS, requires an affirmative showing: (1) that the underlying purpose of the rule will not be served, or would be frustrated, by its application in a particular case, and that grant of waiver is otherwise in the public interest; or (2) that the unique facts and circumstances of a particular case render application of the rule inequitable, unduly burdensome or otherwise contrary to the public interest. Applicants must also show the lack of a reasonable alternative. 47 C.F.R. § 24.819(a)(i).

These standards reflect settled case law requiring the Commission to grant waivers when applicants make the requisite showing.[13] The conditions for temporary relief are met in the present circumstances. As shown below, grant of this petition will serve the public interest without disrupting Commission policy goals.

A. This Request Meets the Commission's Requirements for Temporary Relief.

1. Grant of This Request Will Not Frustrate the Purposes of the Rule.

The purpose of the E911 rule — reducing 911 call completion difficulties on analog networks — will not be frustrated if the Commission grants Samsung a limited authorization to manufacture multi-mode handsets that predominantly operate in the digital mode, for at least two reasons.

First, given that Samsung's sales will be made exclusively to carriers with preferred digital service offerings, the requested relief will not undermine, as a practical matter, the achievement of the Commission's goal of moving in an evolutionary way toward improved analog 911 call processing. In fact, this temporary authorization will serve well the public interest goals pursued by the Commission in particular with respect to emergency calls because the addition of analog features to Samsung's digital handsets increases the percentage of successful 911 call completion in comparison to exclusively digital handsets.[14]

Second, the requested relief will have little impact on E911 call completion. The number of E911 non-compliant handsets on the market is estimated to be more than 75 million industry-

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13 *See WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

14 *See infra* Section III(B).

wide.[15] Even if Samsung were to sell handsets incorporating its current 911 call completion process until July 15, 2000, the quantity of handsets Samsung expects to produce to meet its current contractual commitments with U.S. digital service providers will not significantly increase this total. In terms of the number of handsets to be produced under the special relief that Samsung requests, the Commission already has granted waivers to the dominant handset manufacturers Nokia and Ericsson for periods comparable to that requested here. Samsung, by contrast, is a relatively recent entrant into the domestic handset market that produces fewer handsets for the U.S. market than, for example, Nokia.

2. The Underlying Purpose of Section 22.921 Would Be Met by Grant of the Request Because Samsung's Current 911 Call Completion Method Provides All the Advantages of 911 Call Completion on a Digital System, with Analog Service Serving Only as a Back-Up Mechanism.

Samsung manufactures multi-mode handsets capable of being used in both the digital CDMA/PCS mode and analog (AMPS) mode. Samsung's handsets have been designed, developed, marketed and sold as digital phones to customers seeking handsets for digital networks. In the U.S. market, approximately seventy (70) percent of Samsung's multi-mode handsets over the past three years were sold for use by service providers that own and operate exclusively digital nationwide networks. The remainder of Samsung's handsets have been sold to U.S. carriers with preferred digital service offerings. Samsung's handsets are designed to meet the needs of subscribers who predominantly or exclusively intend to use digital networks and who view the analog mode only as a back-up system.[16]

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[15] This estimate does not include handsets manufactured before February 13 and still in warehouses or distribution channels or handsets being manufactured under previously granted waivers to other manufacturers.

[16] As Ericsson pointed out to the Commission, manufacturers do not design separate analog and digital modules for multi-mode phones and simply put them together in a common handset.

. . . continued

Subscribers choose digital because of advanced features such as voice-activated dialing, follow-me numbers, mobile to mobile calling and information services offered solely in digital mode.[17] Digital subscribers typically show little or no interest in the analog component of their phones. Samsung nonetheless decided to offer subscribers the ability to use their handsets in analog mode because Samsung believes that digital-oriented customers benefit from being able to use analog networks as the last resort where digital coverage is unavailable or inadequate.

When both analog and digital signals are equally available, Samsung's handsets have been programmed to access the preferred carrier's digital network rather than the analog network. The handset will attempt to use the analog network only if the call cannot be processed by any digital network because digital signals are absent or are too weak. Because of the continued expansion of digital networks, the likelihood that Samsung's handsets will have to rely on the back-up analog system is very small. The likelihood is extremely high that any 911 calls

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Instead, the processing algorithms for multi-mode phones are designed in a single package to reduce memory requirements, increase battery life and maintain compact size. It is impractical to consider a multi-mode phone as incorporating two separate modes of operation, and a regulatory approach that does not take into consideration the digital capabilities of multi-mode phones could jeopardize the most expeditious way of completing 911 calls on mobile phones. *See* Ericsson's Request for Approval to Include Digital Modes Within Call Completion Methods, December 29, 1999.

[17] Studies show that digital subscribers are different from analog users. Predominantly business people, digital subscribers are a more lucrative customer base than analog users. The highest penetration of digital users is in the utilities and communications industry, followed by the financial, insurance and real estate industries. Paying nearly thirty percent more, the average monthly wireless bill for digital users is $79.33 compared to $57.18 for analog users. The average business person using digital service makes more phone calls than an analog user. Features such as voice mail, call waiting and caller ID, are an important reason why subscribers choose digital. Nineteen percent of analog subscribers are expected to switch to digital this year. *See* "Digital Wireless: The Future is Now," Research Highlights From a Recent Report by Cahners In-Stat Group of July 1999.

originated with these handsets will be efficiently processed on the digital network, without ever reverting to the analog mode.[18]

Because Samsung's handsets are designed to give priority to the digital mode, Samsung's current 911 call completion method meets the objectives of the *E911 Second Report and Order* to improve 911 reliability, increase the probability that 911 calls will be efficiently and successfully transmitted to public safety agencies and help to ensure that wireless service will be maintained for the duration of the 911 call. Samsung's current 911 call completion methodology has all the advantages the Commission saw associated with digital technology – improved capacity, call quality and coverage, and clear communication.[19] The analog back-up alternative does not come into play in 911 call completion unless the handset is unable to complete the 911 call on any digital network, and it has no effect on the capability of the units to complete a 911 call in the digital mode. It is unlikely that digital subscribers would buy Samsung's handsets if these handsets were not allowing them to satisfactorily use digital networks at all times, whether access is sought for business, for pleasure or in an emergency.

The Commission stated in the *Nokia Order* that the caller's preferred carrier is likely to be the carrier best able to deliver the 911 call quickly and reliably.[20] In the case of Samsung's handsets, the preferred carrier is a digital carrier. Once an available digital channel is identified, it typically takes 0.8 seconds for the handset to validate the channel and initiate the call. If the

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18 *See* "Digital Subs Likely to Use Wireless More," Wireless Week, August 9, 1999 reports that the rate of digital adoption has surpassed industry expectations. "Digital Wireless: The Future is Now," Wireless Week Research Highlights from Report by Cahners In-Stat Group of July 1999, which asserts that digital wireless service users will outnumber analog users by the year 2000.

19 *Nokia Order*, at ¶ 10.

20 *Nokia Order*, at ¶ 8.

preferred digital carrier is not available, the handset will attempt to complete the call through other digital carriers. Only a very brief period of time is necessary for the handset to go through the list of digital carriers.[21] When scanning the preferred roaming list in search of carriers able to process the call, the Affected Handsets comply with the 17-second limit to find an alternative analog system.

If there is no digital signal whatsoever but the handset locates an available analog carrier, the handset will process the 911 call on the analog network within the 17-second limit. By adding the analog function as a back-up alternative to its digitally programmed handsets, Samsung increases the likelihood that 911 calls will be completed.

If, in the absence of a digital signal, an analog signal can be satisfactorily detected but the handset is unable to establish traffic channel, the phone will terminate the connection and reinitiate the call with the same analog carrier, an aspect of analog 911 call processing that departs from the Commission's approved methods. Although the likelihood is slim that a circumstance would arise in which Samsung's handsets would have no other alternative but to operate in analog mode and, at the same time, would experience difficulties in completing the 911 call on an analog channel after a signal has been satisfactorily detected, Samsung is committed to devote all necessary resources to implementing the approved Automatic A/R-IR 911 completion method.

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[21] If the 911 call cannot be successfully completed through any of these carriers, the handset will attempt to access all available systems on the preferred roaming list in the following order: (i) the last accessed unknown digital system; (ii) the last accessed negative digital system; (iii) the last accessed analog system; (iv) the alternative analog system; and (v) any carrier remaining on the list.

3. There Is No Likelihood of Harm Because the Handsets Are Designed for and Sold to U.S. Carriers With Preferred Digital Service Offerings.

In light of the policy underlying the extension of analog 911 call processing requirements to multi-mode handsets, the relief that Samsung requests would not undermine the Commission's objectives in adopting Section 22.921 because of the characteristics of, and the market for, the Samsung handsets at issue. Samsung has designed and sold the units specifically for carriers with preferred digital service offerings. The distinctive features of the units can be employed only on digital networks. Therefore, it would be very unlikely that a consumer would purchase one of the Samsung handsets for use substantially on analog networks because, in comparison to other alternatives, the consumer would be paying more for features that could not be used.

Samsung's marketing and sales patterns bear out this description. All of these handsets are sold to U.S. carriers with either exclusively digital nationwide networks or preferred digital service offerings. Moreover, all of the contractual commitments Samsung seeks to meet through grant of the special relief it requests are with U.S. carriers that have nationwide or near-nationwide networks with preferred digital service offerings. These are handsets that could be marketed successfully only to consumers subscribing to carriers with broad digital coverage.

Samsung acknowledges that the requirements in the E911 processing orders apply to all multi-mode handsets, including the Affected Handsets, without regard to design or purchaser. In the context of the special relief that Samsung seeks, however, the distinctive functional design of the Affected Handsets for a limited target market demonstrates that grant of the special relief has no adverse implications for the public safety objectives of the Commission in the 911 call processing orders. In fact, the analog back-up capability provides an additional alternative for completing a 911 call.

If, by way of illustration, the entire analog back-up capability of the handsets were disabled, the modified unit would be an exclusively digital handset with digital-only capability for 911 call processing. It then would fall, as modified, within the Commission's category of handsets exempted from any 911 call processing requirements.[22] Thus, the analog back-up capability of the Samsung handsets does not detract in any way from digital 911 call completion.

To point out this anomaly is not to challenge the Commission's general determination that all handsets with any analog capability must comply with analog 911 call processing methods when operating in the analog mode. Samsung would have been in timely compliance but for a misinterpretation of what the Commission required. In the particular circumstances of the Samsung handsets that would be manufactured under the special relief requested, however, the grant of the request would have no adverse public policy implications. In sum, the Samsung handsets provide all the digital 911 call processing capability of a digital-only handset, which the Commission has determined to be fully sufficient standing alone, plus a back-up analog alternative that provides for effective 911 call completion.

The policy considerations might be different if the units at issue were designed for dual marketing to either analog carriers or digital carriers, depending upon where the demand for the units might be from time to time. As explained above, however, that is not the case for the Samsung handsets, which are designed to access and better support digital networks and features and have been sold to U.S. carriers with preferred digital service offerings or exclusively digital networks. Indeed, a subscriber who purchases one of these handsets would have a higher likelihood of completing a 911 call than a subscriber with a digital-only unit. In these

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22 *See E911 Second Report and Order*, 14 FCC Rcd at 10991, ¶ 86.

circumstances, therefore, grant of the requested relief does not harm the objectives of the Commission in its 911 call processing orders.

B. Denial of this Request Would Be Contrary to the Public Interest Because It Would Unduly Burden the Development of Digital Service.

A strict application of Section 22.291 in this case would adversely affect the state of competition in the wireless service marketplace and the growth of digital solutions. Digital service providers typically allocate a certain percentage of their market to a few equipment manufacturers of their choice. At a time when a shortage of handsets available for sale on the market is apparent, it is doubtful that other handset manufacturers would have the capacity to fulfill the sudden increased need for handsets that would be experienced by digital service providers that now rely on Samsung's delivery to satisfy new subscriber demand.

Other manufacturers have filed and have been granted similar waiver requests.[23] It is true, of course, that Samsung is submitting this request for relief after the initial deadline for compliance, while other manufacturers granted relief thus far have filed prior to that date. That circumstance, however, in no respect bars granting Samsung the relief it requests and should not, given the objectives of the Commission's rules to effect a transition to more efficient analog 911 call processing without creating market disruptions. Samsung has acted with urgency and entirely in good faith in bringing this matter to the Commission's attention as soon as it was discovered. The requested period for relief is comparable to or less than the period of relief granted by the Commission in its prior orders.[24] Moreover, given that, in the case of Samsung, the particular handsets manufactured pursuant to the requested temporary relief would be made

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23 *See Nokia Order* and *Ericsson Order*.

24 *See Nokia Order* and *Ericsson Order*.

available to carriers offering digitally preferred services, there would be no adverse effect upon the goal of promoting more effective 911 call completion. Indeed, the Commission's denial of the requested relief would increase the number of customers with handsets less capable of completing an emergency call than the Samsung handsets at issue here, because those subscribers would be completely unable to access an analog carrier.

In light of all the circumstances described above, it is evident that the balance of public interest considerations weighs heavily in favor of grant of this request. The brief period of manufacture and distribution of handsets that do not use an approved call completion method will not cause any harm because the handsets are used almost exclusively on networks with preferred digital service offerings, and the analog 911 capability merely provides additional functionality that is not required for digital telephones. At the same time, permitting continued manufacturing and distribution of these handsets will help to continue the development and deployment of digital technologies and will avoid detrimental effects on digital carriers. Especially in light of Samsung's commitments to promote future compliance, which are described below, the public interest strongly favors grant of temporary relief from the requirements of Section 22.921.

IV. SAMSUNG IS COMMITTED TO MOVE QUICKLY INTO INDISPUTABLE COMPLIANCE WITH THE COMMISSION'S 911 ANALOG CALL PROCESSING REQUIREMENTS.

A. Samsung Is Deploying Substantial Resources to Modify Its Software and to Test It Expeditiously.

As stated above, Samsung notified the Commission of the compliance issue as soon as it confirmed that its current 911 call completion methodology differed from the methodologies approved by the Commission. Samsung is now directing substantial resources to modify its software to implement the Commission-approved Automatic A/B-IR call completion

methodology. Samsung expects to have completed necessary software modifications by the end of this week or the first part of next week. The modifications, however, then must be tested on the networks of each of its carrier customers. Samsung estimates that, on an expedited schedule, the process could be completed, no earlier than the end of May and no later than July 15, 2000, depending upon the outcome of the testing. These estimates concur with Nokia and Ericsson's time frame estimates, and the four-month extension of time that the Commission granted these manufacturers to produce and distribute handsets until they could incorporate the modifications they had proposed to their multi-mode handsets to comply with section 22.921 of the Commission's Rules.[25]

As the Commission has recognized, changes of this nature require an irreducible minimum test period to ensure that they do not affect other aspects of handset operation.[26] Nevertheless, Samsung is trying to complete that task much more quickly to limit the number of handsets manufactured for sale and distributed in the United States prior to modification. Samsung will keep the Commission informed of developments in its implementation process that would indicate that handsets could be manufactured and distributed with the Commission-approved call completion method earlier than expected.

B. Samsung Is Taking and Exploring Measures to Promote Present and Future Compliance with the Commission's Rules.

Even as Samsung is devoting its best efforts to modify its handset software to comply with Section 22.921, it also is exploring alternatives to honor its contractual commitments, while

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25 *See Nokia Order*, at ¶ 12.

26 As the Commission recognized in granting relief to Ericsson, "Inadequate testing, which could occur if testing is rushed, might fail to uncover problems that could undercut the performance of handsets, especially in emergency situations." *See Ericsson Order*, at ¶ 7.

maximizing the number of its handsets manufactured for sale in the United States that will incorporate an analog 911 call completion process approved by the Commission. These measures, described below, further demonstrate Samsung's good faith efforts to comply with the Commission's requirements.

As stated previously, Samsung has initiated an expedited implementation program. Software changes for the reprogramming of the Affected Handsets for Automatic A/B-IR analog 911 call completion algorithm already are in progress. An expedited test program at Samsung will follow. Once its carrier customers have tested the modified handsets on their networks and have confirmed acceptance of the changes, Samsung is prepared to implement the changes immediately in its production. Furthermore, Samsung is prepared to implement production of modified units on a carrier-by-carrier and model-by-model basis. In other words, once any single carrier approves any single model as acceptable on its network, Samsung can begin immediately to manufacture for that carrier a version of that handset fully meeting the Commission's analog 911 call processing standards, even if the on-system testing by other carriers, or the testing by that carrier of other models, has not been completed.

Samsung also will upgrade every multi-mode handset capable of receiving the new software that is sent back for any repairs (unrelated to the E911 matter at hand), which repairs ultimately require software upgrades, regardless of whether any such handset was manufactured before or after February 13, 2000. Other manufacturers that obtained the Commission's authorization to manufacture non-compliant handsets have not been asked, nor have they committed, to take this corrective action.

Finally, to avoid any recurrence of compliance questions in the future, Samsung Telecommunications America, Inc. will establish an FCC compliance resource at its

headquarters in Richardson, Texas, which will have the responsibility of promoting Samsung's compliance with the Commission's regulations. Samsung's own internal inquiry into this matter is continuing, with a view to foreclosing the possibility of any similar occurrence in the future. Samsung manufactures a wide array of electronic equipment subject to Commission approval, authorization or regulations and, as the Commission is aware, Samsung's record of compliance is excellent overall. Samsung is committed to maintaining this good record.

Samsung is confident that the revision of the 911 call completion methodology, allied with the additional measures voluntarily undertaken by Samsung, will remedy the compliance issue in a manner acceptable by the Commission.

V. CONCLUSION

Samsung has demonstrated above that it has met the waiver requirement, in light of (i) Samsung's good faith misunderstanding of the rules; (ii) the technical specificities of Samsung's handsets; (iii) Samsung's commitments to remedy the E911 compliance issue affecting the analog operation of its digital handsets; and (iv) public interest considerations.

Accordingly, Samsung requests that the Commission expeditiously waive compliance with Section 22.921 and grant Samsung emergency temporary authority to manufacture and distribute handsets incorporating its current 911 call completion method until July 15, 2000, for purposes of allowing Samsung to meet its existing contractual commitments.

Respectfully submitted,

SAMSUNG TELECOMMUNICATIONS AMERICA, INC., and

SAMSUNG ELECTRONICS CO., LTD.

By: _____
Leonard J. Kennedy
John S. Logan
Cécile G. Nauvens
Its Attorneys

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Dow, Lohnes & Albertson, PLLC
1200 New Hampshire Avenue, N.W.
Suite 800
Washington, D.C. 20036
(202) 776-2000

CERTIFICATE OF SERVICE

I, Maleesha A. Spriggs, a legal secretary for Dow, Lohnes & Albertson, hereby certify that on this 13th day of April 2000, I caused to be served by hand delivery, a true copy of the foregoing **Request for Emergency Temporary Relief**, upon the following:

Mr. Thomas Sugrue, Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

James Schlichting, Esq.
Deputy Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 8B-201
Washington, D.C. 20554

Blaise Scinto, Esq.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3C133
Washington, D.C. 20554

Mr. Daniel Grosh
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.E.
Washington, DC 20554

Maleesha A. Spriggs